

CLAIMS

1. A method for thermally connecting the terminal areas of a contact substrate to the terminal areas of a carrier substrate, wherein the substrates are, in order to produce the connection, arranged in a connecting position such that the terminal areas are situated opposite one another in the plane of the connection, and wherein the contact substrate is heated to the connecting temperature from its rear side that is situated opposite the terminal areas in order to reach the required connecting temperature in the plane of the connection, characterized in that the contact substrate (11, 44) is heated by subjecting the substrate to laser energy.

2. The method according to claim 1, characterized in that the rear side (25, 43) of the substrates is supported while the contact substrate (11, 44) is heated and while the contacting of the terminal areas (26, 27; 28, 29) of the substrates which are situated opposite one another takes place, with the support being realized in such a way that at least partial surface regions of the rear side are supported which lie outside of the energy surface (51) that is subjected to the laser energy.

3. The method according to claim 2, characterized in that the support is at least partially realized by means of a contact surface (14, 48, 25, 56) of a contacting device (10, 30, 39, 52) that serves for connecting or for accommodating a glass fiber (16).

4. The method according to claim 3, characterized in that the substrate (11, 44) is

subjected to a negative pressure via the contact surface (14, 48, 56) in order to transfer the substrate into the connecting position.

5 5. The method according to at least one of the previous claims, characterized in that a displacement of an adhesive material deposit (32) arranged between the substrates in the plane of connection takes place simultaneously with the arrangement of the contact Substrate (11, 44) in the connecting position and the subsequent production of the thermal connection between the terminal areas (26, 27; 28, 29) of the substrates (11, 44; 12), with the adhesive material subsequently being hardened due to the heating of the contact substrate.

10 6. The contacting device for producing a thermal connection between the terminal areas of two substrates which are situated opposite one another in a plane of connection, with a contact mouthpiece for producing a connection with at least one glass fiber end section, characterized in that the contact mouthpiece (13, 31, 45, 53) is provided with a negative pressure device that is connected to a negative pressure opening (24, 47, 58) in a contact surface (14, 48, 56) of the contact mouthpiece (13, 31, 45, 53).

15 7. The contacting device according to claim 6, characterized in that the connection between the at least one glass fiber end section (15, 42, 55) and the contact mouthpiece (13, 31, 45, 53) is produced with the aid of a fiber holding device (19, 35, 46), and in that the contact mouthpiece is provided with a number of glass fiber receptacle channels (17, 40, 41) which corresponds to the number of glass fibers (16) used, with the glass fiber receptacle channels

opening into the contact surface (14, 48, 56).

8. The contacting device according to claim 7, characterized in that the fiber holding device is provided with a fiber advancing unit.

9. The contacting device according to claim 7, characterized in that the glass fiber receptacle channel (17) or the glass fiber receptacle channels (40, 41), respectively, simultaneously serve for forming negative pressure lines of the negative pressure device.

10. The contacting device according at least one of claims 6-9, characterized in that the fiber holding device (19) is provided with a pressure connection (21) in order to form the negative pressure device.

11. The contacting device according to claim 6 or 7, characterized in that the fiber holding device (19, 35, 46, 54) serves for accommodating at least one glass fiber end section (15, 42, 55), namely such that a fiber end cross-section (34) is arranged at the distance from the contact surface (14, 48, 56) of the contact mouthpiece (1.3, 31, 45, 53).

12. The contacting device according to claim 11, characterized in that the contact mouthpiece (53) is realized in the form of a capsule like hollow body that contains a negative pressure opening in the contact surface and a pressure connection (59) in its outer surface (57).

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